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P/00/001
Section 29

AUSTRALIA
Patents Act 1990

We, being the person identified below as the Applicant, request the grant of a patent to the person identified below as the Nominated Person, for an invention described in the accompanying standard complete specification.

[71] **Applicant:**
PAGERGATE COMMUNICATIONS LTD

Applicant's Address:
C/- Mason King, 354 Lambton Quay, Wellington, New Zealand

[70] **Nominated Person:**
PAGERGATE COMMUNICATIONS LTD

[54] Invention Title:
A MESSAGING SYSTEM

[72] Name of actual inventors:
JACK MICHIELA · WILLIAM ROBERTSON

Address:
8 Gill Road, Bayview, Napier,
New Zealand

[74] Address for service in Australia
COLLISON & CO., 117 King William Street, Adelaide, S.A. 5000
 Attorney Code CO

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PAGERGATE COMMUNICATIONS LTD
By their Patent Attorneys
COLLISON & CO

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Section 29(1)
Regulation 3.1(2)

AUSTRALIA

Patents Act 1990

NOTICE OF ENTITLEMENT

We, PAGERGATE COMMUNICATIONS LTD, a New Zealand company, of care of Mason King, 354 Lambton Quay, Wellington, New Zealand, being the Applicants and the Nominated Person in respect of Application No. 78434/98, state the following:

The Person nominated for the grant of the patent has, for the following reason, gained entitlement from the actual inventors:

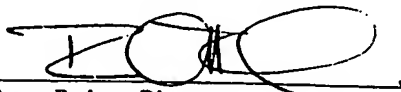
The inventors devised the invention in the course of normal employment with the Nominated Person who is entitled to the granted patent under the provisions of Sub-section 15(1)(c) of the Patents Act 1990.

The person nominated for the grant of the patent is the applicant of the basic application listed on the patent request form.

The basic application listed on the patent request form referred to is the first application made in a convention country in respect of the invention.

dated this 16th day of September 1998

PAGERGATE COMMUNICATIONS LTD


(Roger Barley - Director)





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A MESSAGING SYSTEM
- (51)⁶ International Patent Classification(s)
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PAGERGATE COMMUNICATIONS LTD
- (72) Inventor(s)
JACK MICHIELA; WILLIAM ROBERTSON
- (74) Attorney or Agent
COLLISON & CO, GPO Box 2556, ADELAIDE SA 5001
- (57)

According to one aspect of the invention there is provided a messaging process for facilitating communication between a sender and a receiver, comprising the steps of:

- a) causing processor means to receive an electronic message from a sender, the sender comprising a computer belonging to a network,
- b) causing the processor means to process the electronic message to identify the sender, and to identify the receiver as specified by the sender, and
- c) causing the processor means to address a communication to the receiver and to send the communication, the communication corresponding to the electronic message, the receiver comprising a mobile communications device capable of receiving the communication or a modified form of the communication and manifesting the communication or the modified form of the communication in a way which can be understood by a person using the receiver.

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P/00/011
Regulation 3.2

AUSTRALIA
Patents Act 1990

COMPLETE SPECIFICATION
FOR A STANDARD PATENT
ORIGINAL

Name of Applicant:

PAGERGATE COMMUNICATIONS LTD

Actual Inventors:

JACK MICHIELA
WILLIAM ROBERTSON

Address for Service:

COLLISON & CO., 117 King William Street, Adelaide, S.A. 5000

Invention Title:

A MESSAGING SYSTEM

The following statement is a full description of this invention, including the best method of performing it known to us:

This invention relates to a messaging system.

5 A limitation of many known computer E-mail systems is that they only provide for communications between conventional computers. It is accordingly an object of at least one form of the present invention to go at least some way towards addressing this limitation.

10 According to one aspect of the invention there is provided a messaging process for facilitating communication between a sender and a receiver, comprising the steps of:

- 15 a) causing processor means to receive an electronic message from a sender, the sender comprising a computer belonging to a network,
- b) causing the processor means to process the electronic message to identify the sender, and to identify the receiver as specified by the sender, and
- 20 c) causing the processor means to address a communication to the receiver and to send the communication, the communication corresponding to the electronic message, the receiver comprising a mobile communications device capable of receiving the communication or a modified form of the communication and manifesting the communication or the modified form of the
- 25 communication in a way which can be understood by a person using the receiver.

Preferably the electronic message is a computer E-mail message.

30 Preferably the communication or the modified form of the communication is cordless.

Optionally the processor means incorporates transmitter means for sending the communication or the modified form of the communication to the receiver.

35 However, it should be appreciated that in some forms of the invention the processor means may not incorporate the transmitter means, and may simply send the communication to the receiver by way of distinct transmitter means.

Expediently the receiver is a mobile pager, a mobile telephone, a mobile facsimile machine, or the like.

Advantageously the processor means comprises one or more computer
5 processors.

Desirably the processor means can receive a communication directly or indirectly from the receiver, and in response to information contained in that communication can forward a corresponding electronic message to the
10 sender.

Preferably the processor sends an E-mail confirmation of the communication or the modified communication to an E-mail address of the person using the receiver, and/or sends an E-mail confirmation of the communication or the
15 modified form of the communication to an E-mail address corresponding to the sender.

Some preferred forms of the invention will now be described by way of example.
20

The invention may comprise software designed to control a computer processor in receiving and dealing with E-mail messages from subscribers of a computer network. The processor, when directed by the software, provides a gateway to various messaging devices, such as mobile pagers, mobile
25 telephones, mobile facsimile machines, and cordless communications devices generally.

When the invention is in use one of the subscribers of the computer network can contact a holder of one of the mobile messaging devices. For example,
30 the subscriber may send an E-mail message which is received by the processor. The processor processes the E-mail message to identify the subscriber and the particular mobile messaging device that the subscriber wishes to contact. Based on information contained in the E-mail message the processor then sends a corresponding communication to the mobile
35 messaging device. The processor may send the communication directly or indirectly. If the corresponding communication is sent indirectly then it may be sent via a telecommunications transmitter. The communication may be received by the mobile messaging device and manifested as, in the case of a

cellular telephone or a pager, a series of words appearing in the visual display of the telephone or pager. If the pager does not have a visual display then the communication may be manifested as an audible tone. In cases where the technology is available, the telephone or pager may manifest the communication as an audible word or words. When the mobile messaging device is a facsimile machine the communication from the processor may be manifested as a series of readable words.

In at least some forms of the invention at least some of the mobile messaging devices can send a communication to the processor. The processor processes that communication to identify the messaging device from where it came, and also to identify a subscriber as specified by the communication. The processor then sends a corresponding E-mail message to the specified subscriber dependant on information contained in the communication from the messaging device.

Desirably the software which controls the processor comprises interconnecting software connecting six separate software modules. The software enables an efficient automatic E-mail messaging, identification, and distribution system, using the Internet for the sending and receiving of E-mail messages to or from the mobile messaging devices. The software involves the application of clustering and distribution, and enables the processor to send to multiple types of messaging devices using a number of messaging protocols, for example SMS, TAP, TDP, FAX, and manual.

The first of the six modules is for logging and accounting functions. In particular, the first module creates message logs that relate to E-mail messages, and relates these to a user's billing and registration details. Preferably it is the holders of the mobile messaging devices that are billed. The second module serves a filtering function, allowing extensive control of messages received by the mobile messaging devices. The third module is for interactive on-line user settings, allowing users to change their registration and billing details by way of modem. The fourth module comprises notification software, which can customise messages to a user's requirements. The fifth module provides a relational database which is built by relating messages and their respective billing details, and then moved to a main SQL database to allow for scalability. The sixth module provides for the redistribution of messages within an internal scaleable distribution network of computers

independent of the corresponding operating system. This allows the modules to coexist on one machine, or to exist as independent communicating parts on multiple machines. The messages which are redistributed are standard E-mail, as well as internally generated administration and operating system messages.

While some preferred forms of the invention have been described by way of example, it should be appreciated that modifications and improvements can occur without departing from the scope of the appended claims.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A messaging process for facilitating communication between a sender and a receiver, comprising the steps of:
 - a) causing processor means to receive an electronic message from a sender, the sender comprising a computer belonging to a network,
 - b) causing the processor means to process the electronic message to identify the sender, and to identify the receiver as specified by the sender, and
 - c) causing the processor means to address a communication to the receiver and to send the communication, the communication corresponding to the electronic message, the receiver comprising a mobile communications device capable of receiving the communication or a modified form of the communication and manifesting the communication or the modified form of the communication in a way which can be understood by a person using the receiver.
2. A messaging process according to claim 1, wherein the electronic message is a computer E-mail message.
3. A messaging process according to claim 1 or 2, wherein the communication or the modified form of the communication is cordless.
4. A messaging process according to claim 1, 2 or 3, wherein the processor means incorporates transmitter means which sends the communication or the modified form of the communication to the receiver.
5. A messaging process according to claim 1, 2 or 3, wherein the processor means sends the communication to a transmitter so that the transmitter sends the modified form of the communication to the receiver.
6. A messaging process according to any one of the preceding claims, wherein the receiver is a mobile pager, a mobile telephone, or a mobile facsimile machine.

7. A messaging process according to any one of the preceding claims, wherein the processor means comprises one or more computer processors.

5 8. A messaging process according to any one of the preceding claims, wherein the processor means receives a communication from the receiver, and in response to information contained in that communication forwards a corresponding electronic message to the sender.

10 9. A messaging process according to any one of the preceding claims, wherein the processor sends an E-mail confirmation of the communication or the modified communication to an E-mail address of the person using the receiver, and/or sends an E-mail confirmation of the communication or the modified form of the communication to an E-mail address corresponding to the sender.

15 10. A messaging process according to any one of the preceding claims, substantially as herein described.

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PAGERGATE COMMUNICATIONS LTD
By their Patent Attorneys
COLLISON & CO

ABSTRACT

According to one aspect of the invention there is provided a messaging process for facilitating communication between a sender and a receiver,
5 comprising the steps of:

- a) causing processor means to receive an electronic message from a sender, the sender comprising a computer belonging to a network,
- 10 b) causing the processor means to process the electronic message to identify the sender, and to identify the receiver as specified by the sender, and
- 15 c) causing the processor means to address a communication to the receiver and to send the communication, the communication corresponding to the electronic message, the receiver comprising a mobile communications device capable of receiving the communication or a modified form of the communication and manifesting the communication or the modified form of the communication in a way which can be understood by a person using the
20 receiver.